

## STATEMENT OF BASIS

as required by LAC 33:IX.3109, for draft **Louisiana Pollutant Discharge Elimination System Permit No. LA0081124; AI 18876; PER20090001** to discharge to waters of the **State of Louisiana** as per LAC 33:IX.2311.

The **permitting authority** for the Louisiana Pollutant Discharge Elimination System (LPDES) is:

Louisiana Department of Environmental Quality  
Office of Environmental Services  
P. O. Box 4313  
Baton Rouge, Louisiana 70821-4313

- I. **THE APPLICANT IS:** Village of Forest Hill  
Village of Forest Hill Sewer System  
P.O. Box 309  
Forest Hill, LA 71430
- II. **PREPARED BY:** Afton J. Bessix
- DATE PREPARED:** January 5, 2010
- III. **PERMIT ACTION:** reissue LPDES permit LA0081124, AI 18876; PER20090001  
  
LPDES application received: September 4, 2009  
  
EPA has not retained enforcement authority.  
  
LPDES permit issued: March 1, 2005  
LPDES permit expired: February 28, 2010

### IV. FACILITY INFORMATION:

- A. The application is for the discharge of treated sanitary wastewater from a publicly owned treatment works serving the Village of Forest Hill.
- B. The permit application does not indicate the receipt of industrial wastewater.
- C. The facility is located on Butter Cemetary Road, off LA Highway 497 in Forest Hill, Rapides Parish.
- D. The treatment facility consists of an oxidation pond with rock reed filter bed. Disinfection is by chlorination.
- E. Outfall 001

Discharge Location: Latitude 31° 1' 52" North  
Longitude 92° 31' 35" West

Description: treated sanitary wastewater

Design Capacity: 0.074 MGD

Type of Flow Measurement which the facility is currently using:

Combination Totalizing Meter / Continuous Recorder

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**V. RECEIVING WATERS:**

The discharge is into an unnamed ditch; thence into Hurricane Creek; thence into Cocodrie Lake in segment 060102 of the Vermilion - Teche Basin. This segment is not listed on the 303(d) list of impaired waterbodies.

The designated uses and degree of support for Segment 060102 of the Vermilion - Teche Basin are as indicated in the table below<sup>1/</sup>:

Overall Degree of Support for Segment 060102	Degree of Support of Each Use						
	Primary Contact Recreation	Secondary Contact Recreation	Propagation of Fish & Wildlife	Outstanding Natural Resource Water	Drinking Water Supply	Shell fish Propagation	Agriculture
Partial	Full	Full	Not Supported	N/A	N/A	N/A	N/A

<sup>1/</sup>The designated uses and degree of support for Segment 060102 of the Vermilion - Teche Basin are as indicated in LAC 33:IX.1123.C.3, Table (3) and the 2006 Water Quality Management Plan, Water Quality Inventory Integrated Report, Appendix A, respectively.

**VI. ENDANGERED SPECIES:**

The receiving waterbody, Subsegment 060102 of the Vermilion - Teche Basin, is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U. S. Fish and Wildlife Service (FWS). This strategy was submitted with a letter dated November 17, 2008 from Rieck (FWS) to Nolan (LDEQ). Therefore, in accordance with the Memorandum of Understanding between the LDEQ and the FWS, no further informal (Section 7, Endangered Species Act) consultation is required. It was determined that the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat.

**VII. HISTORIC SITES:**

The discharge is from an existing facility location, which does not include an expansion beyond the existing perimeter. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the 'Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits' no consultation with the Louisiana State Historic Preservation Officer is required.

**VIII. PUBLIC NOTICE:**

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the statement of basis. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

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Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List

For additional information, contact:

Ms. Afton J. Bessix  
Water Permits Division  
Department of Environmental Quality  
Office of Environmental Services  
P. O. Box 4313  
Baton Rouge, Louisiana 70821-4313

#### **IX. PROPOSED PERMIT LIMITS:**

Subsegment 060102, Cocodrie Lake, is not listed on LDEQ's Final 2004 303(d) list as impaired. However, subsegment 060102 was previously listed as impaired for organic enrichment/low DO, ammonia, noxious aquatic plants, chlorides/sulfates/TDS, and suspended solids/turbidity/siltation, for which the below TMDL's have been developed. The Department of Environmental Quality reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional TMDL's and/or water quality studies. The DEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as necessary to achieve compliance with water quality standards.

The following TMDL's have been established for subsegment 060102:

##### *Bayou Cocodrie Watershed TMDL for Dissolved Oxygen Including WLAs for Five Point Source Discharges*

The *Bayou Cocodrie Watershed TMDL for Dissolved Oxygen Including WLAs for Five Point Source Discharges* was originally issued in December 1999. The Cocodrie Watershed TMDL for Oxygen Demanding Substances has been revised to accommodate the December 31, 2002 changes in water quality criteria and the September 22, 2003 revision of the Louisiana Total Maximum Daily Load Technical Procedures. As per the TMDL, "maintaining the current summer water quality standard for DO requires a 100% reduction of manmade nonpoint sources and a reduction of background loads for Cocodrie Lake near the dam. In order to meet the criteria in the winter, there must be reductions of the manmade nonpoint sources in Lake Chicot of up to 100%." The following permit limits were proposed for the Village of Forest Hill: 10 mg/l CBOD<sub>5</sub>, 10 mg/l NH<sub>3</sub>-N, 20 mg/l Org-N, 2.0 mg/l DO. However, the Bayou Cocodrie TMDL was revised to meet new revised dissolved oxygen criteria and has not been approved by EPA. In this revision of the TMDL, allocations for the Village of Forest Hill Sewer System were as follows: 30 mg/l CBOD<sub>5</sub>, 15 mg/l NH<sub>3</sub>-N, and 2.0 mg/l minimum DO.

Therefore, since the Village of Forest Hill has shown the ability to meet the previous permit limits, this discharge will be permitted accordingly.

##### *Cocodrie Lake TMDL for Ammonia and Noxious Aquatic Plants*

This TMDL is based on the linkage between ammonia/nitrogen levels and noxious aquatic plant growth in Cocodrie Lake, which is that reductions in ammonia/nitrogen loadings to the lake will lead to reduced plant growth and infestation, and thereby contribute to reaching the goal of attaining the dissolved oxygen standard. As per the TMDL, there are no direct point source dischargers to the Cocodrie Lake; however, there are two point source dischargers (Village of Forest Hill and City of Glenmora) located on

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the tributaries flowing into Cocodrie Lake. EPA expects ammonia contribution from the point source dischargers to be controlled through NPDES permit limits for  $\text{NH}_3\text{-N}$ , referencing the DO model LDEQ submitted for Bayou Cocodrie in December 1999, which the second revision was completed in September 2003.

Therefore, this discharge will be permitted accordingly.

*TMDL for TSS, Turbidity, and Siltation for the Bayou Teche Watershed*

The *TMDL for TSS, Turbidity, and Siltation for the Bayou Teche Watershed* was finalized on May 2, 2002. As per the TMDL, "Point source loads do not represent a significant source of TSS as defined in this TMDL. Point sources discharge primarily organic TSS, which does not contribute to habitat impairment resulting from sedimentation. Because the point sources are minor contributors, and dischargers of organic suspended solids from point sources are already addressed by LDEQ through their permitting of point sources to maintain water quality standards for DO, the wasteload allocation for point source contributions were set to zero. This TMDL only addresses the landform contribution of TSS/sediment and does not address the insignificant point source contributions." Therefore, TSS limits will remain as in the previous LPDES permit.

*Cocodrie Lake TMDL for Chloride, Sulfate, and Salinity/Total Dissolved Solids (TDS)*

As per the TMDL, "there are no direct point sources dischargers to the Cocodrie Lake. However, the Village of Forest Hill is listed as a point source discharger located on the tributaries flowing into Cocodrie Lake. The observed (calculated) load was less than the allowable load; therefore, no reduction in load is required by point source dischargers. Therefore, limitations for chlorides, sulfates, or TDS will not be placed in this permit.

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**Final Effluent Limits:****OUTFALL 001**

Final limits shall become effective on the effective date of the permit and expire on the expiration date of the permit.

<b>Effluent Characteristic</b>	<b>Monthly Avg. (lbs./day)</b>	<b>Monthly Avg.</b>	<b>Weekly Avg.</b>	<b>Basis</b>
CBOD <sub>5</sub>	N/A	10 mg/l	15 mg/l	Limits are set in accordance with the <i>Bayou Cocodrie Watershed TMDL for Dissolved Oxygen Including WLAs for Five Point Source Discharges</i>
TSS	N/A	15 mg/l	23 mg/l	Since there is no numeric water quality criterion for TSS, and in accordance with the current Water Quality Management Plan, the TSS effluent limitations shall be based on a case-by-case evaluation of the treatment technology being utilized at a facility. Therefore, a Technology Based Limit has been established through Best Professional Judgement for the type of treatment technology utilized at this facility.
Ammonia-Nitrogen	N/A	10 mg/l	20 mg/l	Limits are set in accordance with the <i>Bayou Cocodrie Watershed TMDL for Dissolved Oxygen Including WLAs for Five Point Source Discharges</i>
Dissolved Oxygen	N/A	2.0 mg/l	N/A	Limits are set in accordance with the <i>Bayou Cocodrie Watershed TMDL for Dissolved Oxygen Including WLAs for Five Point Source Discharges</i>

\*Concentration limits are used in accordance with LAC 33:IX.2709.F.1.b which states that mass limitations are not necessary when applicable standards and limitations are expressed in other units of measurement. LAC 33:IX.709.B references LAC 33:IX.711 which express BOD<sub>5</sub> and TSS in terms of concentration.

\*\*This Dissolved Oxygen limit is the lowest allowable average of daily discharges over a calendar month. When monitoring is conducted, the Dissolved Oxygen shall be analyzed immediately, as per 40 CFR 136.3.

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**Other Effluent Limitations:****1) Fecal Coliform**

The discharge from this facility is into a water body which has a designated use of Primary Contact Recreation. According to LAC 33:IX.1113.C.5., the fecal coliform standards for this water body are 200/100 ml and 400/100 ml. Therefore, the limits of 200/100 ml (Monthly Average) and 400/100 ml (Weekly Average) are proposed as Fecal Coliform limits in the permit. These limits are being proposed through Best Professional Judgement in order to ensure that the water body standards are not exceeded, and due to the fact that existing facilities have demonstrated an ability to comply with these limitations using present available technology.

**2) pH**

According to LAC 33:IX.3705.A.1., POTW's must treat to at least secondary levels. Therefore, in accordance with LAC 33:IX.5905.C., the pH shall not be less than 6.0 standard units nor greater than 9.0 standard units at any time.

**3) Solids and Foam**

There shall be no discharge of floating solids or visible foam in other than trace amounts in accordance with LAC 33:IX.1113.B.7.

**X. PREVIOUS PERMITS:**

**LPDES Permit No. LA0081124:** Issued: March 1, 2005  
Expired: February 28, 2010

**Interim Effluent Limitations:** beginning the effective date of the permit lasting until three years from the effective date of the permit

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Monthly Avg.</u>	<u>Weekly Avg.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	1/week	Measure
CBOD <sub>5</sub>	10 mg/l	15 mg/l	1/month	Grab
TSS	15 mg/l	23 mg/l	1/month	Grab
Ammonia-Nitrogen	Report	Report	1/month	Grab
Dissolved Oxygen	Report	---	1/month	Grab
Fecal Coliform Colonies	200	400	1/month	Grab
ph (Standard Units)	6.0 min	9.0 max	1/month	Grab

**Final Effluent Limitations:** beginning three years from the effective date of the permit through the expiration date of the permit

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>		<u>Monitoring Requirements</u>	
	<u>Monthly Avg.</u>	<u>Weekly Avg.</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	1/week	Measure
CBOD <sub>5</sub>	10 mg/l	15 mg/l	1/month	Grab
TSS	15 mg/l	23 mg/l	1/month	Grab
Ammonia-Nitrogen	15 mg/l	30 mg/l	1/month	Grab
Dissolved Oxygen	2.0 mg/l	---	1/month	Grab
Fecal Coliform Colonies	200	400	1/month	Grab
ph (Standard Units)	6.0 min	9.0 max	1/month	Grab

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## **XI. ENFORCEMENT AND SURVEILLANCE ACTIONS:**

### **A) Inspections**

A review of the files indicates the following inspection was performed during the period beginning March 2007 and ending March 2009 for this facility.

Date: November 14, 2008

Inspector: LDEQ

Findings and/or Violations:

1. Effluent was light brown in color with no visible solids, smell or foam.
2. Flow meter had a broken chart recorder motor, which was repaired on November 20, 2008.
3. Facility was not preparing yearly audit report.
4. Rock reed filter was choked with grass and weeds.
5. Facility was not sampling for corrected parameters as specified in permit. Facility contacted Sherry Labs and correct parameters will be added to the next sampling collection, adding NH<sub>3</sub>, CBOD<sub>5</sub>, and DO, deleting BOD<sub>5</sub>.
6. The facility had two permit excursions in the last 12 months: 1 TSS and 1 Fecal. Fecal excursion caused by large amount of rainfall from Hurricane Gustav.

### **B) Compliance and/or Administrative Orders**

A review of the files indicates that no recent enforcement actions have been administered against this facility.

### **C) DMR Review**

A review of the discharge monitoring reports for the period beginning March 2007 through March 2009 has revealed the following violations:

Parameter	Outfall	Period of Excursion	Permit Limit	Reported Quantity
Fecal Coliform (mthly avg.)	001	October 2007	200/100 ml	250/100 ml
Fecal Coliform (mthly avg.)	001	January 2008	200/100 ml	280/100 ml
TSS (mthly avg.)	001	April 2008	15 mg/l	35 mg/l
TSS (wkly avg.)			23 mg/l	35 mg/l
BOD <sub>5</sub> (mthly avg.)	001	August 2008	10 mg/l	17 mg/l
BOD <sub>5</sub> (wkly avg.)			15 mg/l	17 mg/l
Fecal Coliform (mthly avg.)	001	September 2008	200/100 ml	6,000/100 ml
Fecal Coliform (wkly avg.)			400/100 ml	6,000/100 ml
Fecal Coliform (mthly avg.)	001	November 2008	200/100 ml	290/100 ml
Fecal Coliform (mthly avg.)	001	December 2008	200/100 ml	3,700/100 ml
Fecal Coliform (wkly avg.)			400/100 ml	3,700/100 ml
Fecal Coliform (mthly avg.)	001	March 2009	200/100 ml	212/100 ml
Fecal Coliform (mthly avg.)			400/100 ml	4,500/100 ml

- Facility was not sampling for correct parameters from March 2007 through December 2008; therefore, the proper analytical data was not available for review. The following parameters were missing from the Discharge Monitoring Reports: NH<sub>3</sub>-N, DO, and CBOD<sub>5</sub> were not available for review.

## **XII. ADDITIONAL INFORMATION:**

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The Louisiana Department of Environmental Quality (LDEQ) reserves the right to impose more stringent discharge limitations and/or additional restrictions in the future to maintain the water quality integrity and the designated uses of the receiving water bodies based upon additional water quality studies and/or TMDL's. The LDEQ also reserves the right to modify or revoke and reissue this permit based upon any changes to established TMDL's for this discharge, or to accommodate for pollutant trading provisions in approved TMDL watersheds as requested by the permittee and/or as necessary to achieve compliance with water quality standards. Therefore, prior to upgrading or expanding this facility, the permittee should contact the Department to determine the status of the work being done to establish future effluent limitations and additional permit conditions.

In accordance with LAC 33:IX.2903., this permit may be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitations issued or approved under sections 301(b)(2)(c) and (D); 304(b)(2); and 307(a)(2) of the Clean Water Act, if the effluent standard or limitations so issued or approved:

- a) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
- b) Controls any pollutant not limited in the permit; or
- c) Requires reassessment due to change in 303(d) status of waterbody; or
- d) Incorporates the results of any total maximum daily load allocation, which may be approved for the receiving water body.

At present, the **Monitoring Requirements, Sample Types, and Frequency of Sampling** as shown in the permit are standard for facilities of flows between 0.02 and 0.10 MGD.

Effluent CharacteristicsMonitoring Requirements

	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow	1/week	Measure
CBOD <sub>5</sub>	1/month	Grab
Total Suspended Solids	1/month	Grab
Ammonia-Nitrogen	1/month	Grab
Dissolved Oxygen	1/month	Grab
Fecal Coliform Bacteria	1/month	Grab
pH	1/month	Grab

Pretreatment Requirements

Based upon consultation with LDEQ pretreatment personnel, it is recommended that LDEQ Option 1 Pretreatment Language be included in LPDES Permit LA0081124, due to the lack of either an approved or required pretreatment program.

Pollution Prevention Requirements

The permittee shall institute or continue programs directed towards pollution prevention. The permittee shall institute or continue programs to improve the operating efficiency and extend the useful life of the facility. The permittee will complete an annual Environmental Audit Report **each year** for the life of this permit according to the schedule below. The permittee will accomplish this requirement by completing an Environmental Audit Form which has been attached to the permit. All other requirements of the Municipal Wastewater Pollution Prevention Program are contained in Part II of the permit.



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The audit evaluation period is as follows:

Audit Period Begins	Audit Period Ends	Audit Report Completion Date
Effective Date of Permit	12 Months from Audit Period Beginning Date	3 Months from Audit Period Ending Date

**XIII. TENTATIVE DETERMINATION:**

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in this Statement of Basis.

**XIV. REFERENCES:**

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 8, "Wasteload Allocations / Total Maximum Daily Loads and Effluent Limitations Policy," Louisiana Department of Environmental Quality, 2005.

Louisiana Water Quality Management Plan / Continuing Planning Process, Vol. 5, "Water Quality Inventory Section 305(b) Report," Louisiana Department of Environmental Quality, 1998.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Chapter 11 - "Louisiana Surface Water Quality Standards," Louisiana Department of Environmental Quality, 2004.

Louisiana Administrative Code, Title 33 - Environmental Quality, Part IX - Water Quality Regulations, Subpart 2 - "The LPDES Program," Louisiana Department of Environmental Quality, 2004.

Low-Flow Characteristics of Louisiana Streams, Water Resources Technical Report No. 22, United States Department of the Interior, Geological Survey, 1980.

Index to Surface Water Data in Louisiana, Water Resources Basic Records Report No. 17, United States Department of the Interior, Geological Survey, 1989.

LPDES Permit Application to Discharge Wastewater, Village of Forest Hill, Village of Forest Hill Sewer System, September 4, 2009.